

other services such as long distance services,¹¹⁰ enhanced services,¹¹¹ and the Internet.¹¹² To the extent that individual subscribers use other platforms or technologies to replace particular functionalities of local exchange service, we believe these other platforms and technologies constitute a local exchange service replacement for purposes of this prong of CALEA.¹¹³ We seek comment on this reading. As mentioned above, moreover, CALEA is about incorporating surveillance assistance capabilities into the network equipment, facilities or services of entities subject to the statute. To the extent that costs associated with

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engaged in the provision of a commercial mobile service under section 332(c) of this title, except to the extent that the Commission finds that such service should be included in the definition of such term.” *Id.* The term “telephone exchange service” means (A) service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge, or (B) comparable service provided through a system of switches, transmission equipment, or other facilities (or combination thereof) by which a subscriber can originate and terminate a telecommunications service.” 47 U.S.C. § 153(47). The definition of “telephone exchange service” was expanded after CALEA was enacted to include the subsection (B) “comparable service” clause but subsection (A), as well as the definition of “exchange access,” were not modified by the 1996 Act. *See* 47 U.S.C. § 153 (16), (47).

¹¹⁰*See* 47 U.S.C. § 153(16) (definition of “exchange access”). The term “exchange access” means “the offering of access to telephone exchange services or facilities for the purpose of the origination or termination of telephone toll services.” *Id.*

¹¹¹*See Amendments of Part 69 of the Commission’s Rules Relating to Enhanced Service Providers*, CC Docket No. 87-215, *Order*, 3 FCC Rcd 2631 (1988) at 2631, ¶ 2 (explaining how the local telephone exchange is used for accessing enhanced services).

¹¹²*See IP-Enabled Services Notice*, *supra* n.1 at 4870, ¶ 9 n.32.

¹¹³We note that the term “replacement” is sometimes equated with the economic concept of substitutability. In strict economic terms, “substitutes” are services exhibiting positive cross-elasticity of demand. That is, two services are “substitutes” in the economic sense if demand for one rises when the price for the other increases, and falls when the price for the other drops. *See, e.g.,* Steven E. Landsburg, *Price Theory and Applications* 108 (3d ed. 1995). In considering the type of “replacement” contemplated under the Substantial Replacement Provision, we do not believe Congress intended “economic substitutability” to define this term, but, rather functional substitutability. *See IP-Enabled Services Notice*, *supra* n.1 at 4887, ¶ 37 (addressing functional substitutability and economic substitutability). We ask whether commenters agree and whether there are considerations other than substitutability that we should consider. For example, one commenter claims the Commission must construe the phrase “substantial portion” for CALEA purposes the same way it has construed the phrase in the context of the definition of “commercial mobile service” under section 332(d)(1) of the Communications Act. 47 U.S.C. § 332(d)(1); *see Implementation of Sections 3(n) and 332 of the Communications Act Regulatory Treatment of Mobile Services*, GN Docket 93-252, *Second Report and Order*, 9 FCC Rcd 1411 (1994) at 1427-31, ¶¶ 61-70 (*CMRS Second Report and Order*); *see* Earthlink Comment at 9-10. We note, however, that section 332(d)(1) was specifically interpreted for purposes of the Communications Act, and we have already established that the meaning of certain terms for the Communications Act and CALEA are different. Moreover, the phrase “substantial portion” in section 332 precedes the phrase “of the public” suggesting a more quantitative interpretation than necessarily required for CALEA purposes. In CALEA, the phrase precedes “of the local telephone exchange service.” Thus, despite the fact that CALEA’s legislative history uses the phrase “substantial portion of the public,” when discussing the Substantial Replacement Provision, the language included in the statute differs from the language in section 332(d). We also remind commenters that even when defining the “public” for purposes of applying the Communications Act’s Title II requirements to telecommunications carriers, courts and the Commission have recognized that the “public” need not include everyone and carriers’ offerings may be limited to only certain categories of users and still be considered available to the “public.” *See Nat’l Ass’n of Regulatory Util. Comm’rs v. FCC*, 525 F.2d 630, 642 (D.C. Cir. 1976).

such capabilities are a factor in compliance obligations, waiting until a service provided over a new technology is widely deployed on some geographic basis before deeming it subject to CALEA under the Substantial Replacement Provision would be contrary to sensible policy, for it would be significantly more difficult and expensive to retrofit existing facilities with CALEA-compliant capabilities than if applicable capability requirements were built in at the early development stages with certainty that CALEA would apply. Law Enforcement asserts that broadband Internet access services and mediated VoIP services currently replace a substantial portion of local exchange service so as to bring these services within the scope of CALEA under this prong of the Substantial Replacement Provision.¹¹⁴ Some commenters agree and we tentatively adopt that view.¹¹⁵ Are there other services, such as classes of wireless services that may not meet the definition of a “commercial mobile service” under section 102(8)(B)(i) of CALEA, that may nevertheless satisfy this prong of the Substantial Replacement Provision?

45. Finally, we seek comment on the meaning of “public interest” under this section of CALEA. The Substantial Replacement Provision requires the Commission to find it in the public interest to deem a person or entity subject to CALEA under this subsection. CALEA does not define “public interest” specifically in the context of the Substantial Replacement Provision. We note, however, that the *House Report* explicitly lists three factors that the Commission “shall consider” in making its public interest determination specifically in the context of the Substantial Replacement Provision – whether it would “promote competition, encourage the development of new technologies, and protect public safety and national security.”¹¹⁶ We conclude that these three factors, at a minimum, should inform our public interest finding. We seek comment on this analysis and invite commenters to discuss any other factors that should provide the foundation of any public interest determination we make under this subsection.

(ii) Telecommunications Carriers, Generally

46. As stated above, even outside the definition of Substantial Replacement Provision, Law Enforcement argues that section 102(8)(A)'s definition of “telecommunications carrier” departs from the Communications Act definitions in several ways that also signal Congress’s intent that CALEA have a broader reach than the Communications Act.¹¹⁷

- Section 102(8)(A) refers to “a person or entity engaged in the transmission or *switching* of wire or electronic communications as a common carrier for hire.”¹¹⁸ The Communications Act definitions of “telecommunications,”¹¹⁹ “telecommunications service,”¹²⁰ and

¹¹⁴See Petition at 16-17 n. 39, 22, 29; see also NYSAG Comments at 16-17.

¹¹⁵See, e.g., Verizon Comments at 4.

¹¹⁶See *House Report*, 1994 U.S.C.C.A.N at 3501 (Section-by-Section Analysis) (indicating that the Commission “shall consider whether such determination would promote competition, encourage the development of new technologies, and protect public safety and national security”). *Id.* at 31.

¹¹⁷See Petition at 9-15.

¹¹⁸47 U.S.C. § 1001(8)(A) (emphasis added).

¹¹⁹See 47 U.S.C. § 153(43). The term “telecommunications” means “the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.” *Id.*

"telecommunications carrier,"¹²¹ by contrast, refer *only* to transmission, not switching.¹²² We discuss above our belief that the term "switching" in the Substantial Replacement Provision covers capabilities of routers and other equipment used in packet-based services. Are those provided as a "common carrier for hire" such that these services could also be covered in section 102(8)(A)?¹²³

- The Communications Act definition of "telecommunications" limits that term to the transmission "between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent or received."¹²⁴ Section 102(8)(A) contains no such limitation, instead indicating that telecommunications carriers are required to comply with CALEA with respect to services or facilities "that provide a customer or subscriber with the ability to originate, terminate or direct communications."¹²⁵
- CALEA's reference to "common carrier" in section 102(8)(A) neither refers to the Communications Act's definition of common carrier (*whereas prior versions of the draft bill did*) nor defines the term.¹²⁶

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¹²⁰See 47 U.S.C. § 153(46). The term "telecommunications service" means "the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used. *Id.*

¹²¹See 47 U.S.C. § 153(44). The term "telecommunications carrier" means "any provider of telecommunications services, except that such term does not include aggregators of telecommunications services (as defined in section 226 of this title). A telecommunications carrier shall be treated as a common carrier under this chapter only to the extent that it is engaged in providing telecommunications services, except that the Commission shall determine whether the provision of fixed and mobile satellite service shall be treated as common carriage." *Id.*

¹²²We explore the scope and meaning of "switching" for purposes of CALEA in ¶ 43, *supra* (analyzing the Substantial Replacement Provision).

¹²³47 U.S.C. § 1001(8)(A).

¹²⁴See 47 U.S.C. § 153(43).

¹²⁵See 47 U.S.C. § 1002(a); see also *House Report*, 1994 U.S.C.C.A.N. at 3498 (Narrow Scope Section). Nothing in CALEA appears to prevent an entity that combines "transmission or switching" with the data processing enhancements to be subject to CALEA with respect to the "transmission or switching" capabilities.

¹²⁶The version of the proposed CALEA statute that was reported by Committee for approval with the *House Report* just prior to enactment by Congress was modified to remove a specific reference to the Communications Act's definition of common carrier. See *House Report*, 1994 U.S.C.C.A.N. at 3500 (including the phrase "within the meaning of section 3(h) of the Communications Act," which was ultimately deleted from the definition when enacted as section 102(8)(A)). Section 3(h) was the definition of "common carrier" or "carrier" under the Communications Act prior to the 1996 Act. The definition of "common carrier" is now found in section 3(10). 47 U.S.C. § 153(10). Under both the original section 3(h) definition and the current section 3(10) definition, common carrier meant "any person engaged as a common carrier for hire, in interstate or foreign communication by wire or radio or in interstate or foreign radio transmission of energy, except where reference is made to common carriers not subject to this chapter; but a person engaged in radio broadcasting shall not, insofar as such person is so engaged, be deemed a common carrier." 47 U.S.C.A. § 153(h) (1995). We note that a similar reference to the Communications Act with respect to the definition of a CMRS provider *was not*, however, omitted (continued....)

These additional definitional differences strengthen our tentative conclusion above that CALEA's definition is more inclusive, but we ask commenters to what extent we should consider these additional definitional differences between CALEA and the Communications Act in our analysis.

b. Application of Substantial Replacement Provision to Broadband Internet Access and Other Packet-based Services

(i) Broadband Internet Access Services

47. Law Enforcement seeks a Commission declaration that all forms of broadband Internet access are subject to CALEA.¹²⁷ Law Enforcement asserts that these services are so clearly subject to CALEA that the Commission should issue a ruling declaring so.¹²⁸ While we agree with commenters that we must develop a more complete record on the substantial factual and legal issues involved before we can make final determinations,¹²⁹ we tentatively conclude that facilities-based providers of any type of broadband Internet access, including but not limited to wireline, cable modem, satellite, wireless, and broadband access via the powerline, whether provided on a wholesale or retail basis, are subject to CALEA (with possible limited exception discussed below),¹³⁰ because they provide replacement for a substantial portion of the local telephone exchange service used for dial-up Internet access service and such treatment is in the public interest.¹³¹ We base this belief on our reading of CALEA and its legislative history as well as the record thus far.

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from the version of the definition of CMRS as reported and enacted. See 47 U.S.C. § 1001(8)(B)(i). If Congress had intended the CALEA definition of "telecommunications carrier" to mirror the definition of "common carrier" under the Communications Act or as interpreted under the Commission's rules, it could have specifically indicated so as it did in the case of CMRS in section 102(8)(B)(i). See 47 U.S.C. § 1001(8)(B)(i).

¹²⁷See Petition at 15-32; Law Enforcement Reply Comments at 12; NYSAG Comments at 5-6; VeriSign, Inc. ("VeriSign") Comments at 12-13.

¹²⁸Petition at 15-32.

¹²⁹See, e.g., Earthlink Comments at 16-18; SBC Comments at 5; Cisco Systems, Inc. Reply Comments at 2; Southern Communications Services, Inc. Reply Comments at 3-5; UPLC Comments at 6-7; ITI Comments at 3 & n.40; VONC Comments at 2; SIA Comments at 15-18.

¹³⁰See *infra* ¶ 49.

¹³¹We acknowledge that including all facilities-based broadband Internet access providers within the scope of CALEA could be said to depart from our prior statement that when an entity uses its own facilities "to distribute an information service only, the mere use of transmission facilities would not make the offering subject to CALEA as a telecommunications service." *Second R&O, supra* n.8 at 7120, ¶ 27. This prior determination, however, was based on applying CALEA at that time to telecommunications services as defined by the Communications Act absent consideration of the meaning and intent of the Substantial Replacement Provision or Congress's intent to expand the universe of entities deemed "telecommunications carriers" under CALEA. Given the more in-depth inquiry and analysis into certain of CALEA's statutory provisions that we are undertaking, for the first time, in this proceeding, as well as the legislative history that informs our analysis, we believe that our current view is compelled by CALEA and the public interest. We further note, that the Commission made this statement in the context of discussing the "joint use" rule and recognizing that when the same facilities support *both* CALEA-subject services and non-CALEA-subject services, the facilities that support the non-CALEA subject services end up subject to CALEA "in order to ensure the ability to surveil the telecommunications services" provided over the same facilities. See *id.*

48. In reaching this tentative conclusion, we tentatively determine that such broadband Internet access service providers satisfy each of the three prongs of the Substantial Replacement Provision: broadband Internet access includes the switching (routing) and transmission functionality; it replaces a substantial portion of the local telephone exchange service used for narrowband Internet access; and the public interest factors we consider at a minimum, *i.e.*, the effect on competition, the development and provision of new technologies and services, and public safety and national security, weigh in favor of subjecting these broadband Internet access services to CALEA.¹³² Specifically, because all facilities-based providers of broadband Internet access (except as discussed below) would be covered by CALEA, no deterrent effect on competition should occur.¹³³ Furthermore, many commenters have indicated they are currently cooperating with LEAs to provide CALEA-like capabilities.¹³⁴ We note that industry has worked with LEAs with respect to new services and technologies yet we are not aware of any serious adverse impact on the deployment and provision of new technologies and services. The overwhelming importance of CALEA compliance to law enforcement efforts to safeguard homeland security and combat crime weighs heavily in favor of application of CALEA obligations to broadband Internet access services. Moreover, we believe Congress included the Substantial Replacement Provision to specifically empower the Commission to bring services such as broadband Internet access within CALEA's reach if appropriate. We seek comment on this tentative conclusion.

49. There may exist discrete groups of entities for which the public interest may not be served by including them under the Substantial Replacement Provision. As discussed above, we will base such determination on the three public interest factors, at a minimum, as identified above, including: whether it would promote competition, encourage the development of new technologies, and protect public safety and national security.¹³⁵ For example, entities that deploy broadband capability to consumers in underserved areas may fall in this category because of the potential deterrent effect it could have on deployment in particular circumstances (negatively impacting the first and second factors, *i.e.*, protecting competition and

¹³²See generally *supra* ¶ 40-44; see also *supra* ¶ 45 (specifically identifying the three public interest factors — to “promote competition, encourage the development of new technologies, and protect public safety and national security” — which CALEA’s legislative history indicates the Commission shall consider); see also Verizon Comment at 8 (asserting that finding these services subject to CALEA is in the public interest).

¹³³We note that establishments acquiring broadband Internet access to permit their patrons to access the Internet do not appear to be covered by CALEA (assuming they were otherwise “telecommunications carriers” under CALEA). Examples of these entities include schools, libraries, hotels, coffee shops, etc. See *e.g.*, American Association of Community Colleges *et al.* Comments at 15-20 (discussing the deterrent effect and cost of potential CALEA obligations). The underlying facilities-based broadband transmission providers that sell the broadband access service to these establishments to enable Internet access for their patrons would, however, be responsible for CALEA obligations under our tentative conclusion and thus Law Enforcement’s needs would be addressed through these providers. See, *e.g.*, T-Mobile USA, Inc. Reply Comments at 6-8 (discussing Wi-Fi HotspotsSM it provides to certain establishments). We seek comment on this analysis.

¹³⁴See, *e.g.*, IPI Reply Comments at 7; ITI Comments at 4; Global Crossing Comments at 2; Covad Comments at 3-4; see also AT&T Comments at 5-6; ISPPC Comments at 5; Time Warner Telecom, Inc. (“TWT”) Reply Comments at 2; United States Cellular Corporation Reply Comments at 2-3; VONC Comments at 15-16; Vonage Holdings Corp. (“Vonage”) Reply Comments at 1-2; Level 3 Reply Comments at 1-2.

¹³⁵See *supra* ¶ 45.

encouraging the development of new technologies).¹³⁶ Small businesses that provide wireless broadband Internet access to rural areas may be one example.¹³⁷ Under this example, the first and second factors may not negatively impact the third factor – i.e., protect public safety and national security – where it could be shown that LEAs' needs could be addressed through means other than including such entities within CALEA. We seek comment on this analysis and how best to identify these discrete groups of broadband Internet access providers and what additional factors would be appropriate for the Commission to consider in addressing their particular circumstances.

50. We do not believe that CALEA's exclusion for information services should alter our tentative conclusion. Congress expressly excluded "persons or entities insofar as they are engaged in providing information services"¹³⁸ from CALEA's definition of "telecommunications carrier."¹³⁹ (We refer to this as the Information Services Exclusion.) We also note that section 103(b)(2)(A) of CALEA provides that the CALEA capability requirements do not apply to information services.¹⁴⁰ CALEA's definition of "information services" is very similar to that of the Communications Act.¹⁴¹ For purposes of the Communications Act, the Commission has concluded that cable modem service is an information service

¹³⁶See, e.g., RIITA Comments at 2; National Association of State Utility Consumer Advocates ("NASUCA") Reply Comments at 6-7; National Telecommunications Cooperative Association ("NTCA") Comments at 4-5; Concerned CALEA Compliant Carriers ("CCCC") Comments at 4.

¹³⁷See, e.g., Leap Comments at 5-6, RIITA Comments at 2; see also UPLC Comments at 7-8; Rural Cellular Association Reply Comments at 3.

¹³⁸47 U.S.C. § 1001(6)(B) & (C) (emphasis added). CALEA provides that the term "information services":

(A) means the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications; and

(B) includes –

(i) a service that permits a customer to retrieve stored information from, or file information for storage in, information storage facilities;

(ii) electronic publishing; and

(iii) electronic messaging services; but

(C) does not include any capability for a telecommunications carrier's internal management, control, or operation of its telecommunications network.

47 U.S.C. § 1001(6). We will refer to this as the "Information Services Exclusion."

¹³⁹See 47 U.S.C. § 1001(8)(C)(i); see also 47 U.S.C. § 1002(b)(2)(A) (stating that CALEA's capability requirements do not apply to information services). According to the accompanying *House Report*, this exclusion encompasses "Internet service providers or services such as Prodigy and America-On-Line." *House Report*, 1994 U.S.C.C.A.N. at 3498.

¹⁴⁰47 U.S.C. § 1002(b)(2)(A).

¹⁴¹Under the Communications Act, "information service" is defined as "the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operating of a telecommunications system or the management of a telecommunications service." 47 U.S.C. § 153(20).

and has tentatively concluded that wireline broadband Internet access service is also an information service.¹⁴² Assuming those determinations become final, those services would, nonetheless, have to be evaluated under CALEA's separate definition of "telecommunications carrier" which, as discussed above, is broader than the definition in the Communications Act.¹⁴³ Where a service provider is found to fall within CALEA's Substantial Replacement Provision (as explained above) it would be deemed a "telecommunications carrier" for purposes of CALEA to which CALEA obligations would apply. If, at the same time, we interpreted CALEA's Information Services Exclusion to apply, it would present an irreconcilable tension; that is, particular service providers would find themselves at the same time subject to CALEA under the Substantial Replacement Provision and exempted from it by virtue of the Information Services Exclusion. We believe that the better reading of the statute is to recognize and give full effect to CALEA's broader definition of "telecommunications carrier" and to interpret the statute to mean that where a service provider is determined to fall within the Substantial Replacement Provision, by definition it cannot be providing an information service for purposes of CALEA. An examination of the history and purposes of CALEA supports this interpretation.

51. The facts surrounding the enactment of CALEA and statements of Congress support the conclusion that Congress did not intend for broadband Internet access to be excluded from CALEA when it falls within the Substantial Replacement Provision. At the time CALEA was enacted, Internet services were generally provided on a dial-up basis by two separate entities providing two different capabilities – a local exchange telephone company carrying the calls between an end user and its chosen Internet Service Provider ("ISP"), and the ISP providing e-mail, content, web hosting and other Internet services. In the *House Report*, Congress was quite clear as to the CALEA status of these different entities: The LEC providing the local exchange transmission service that enabled the call to that dial-up ISP – "the transmission of an E-mail message" – was covered by CALEA as a telecommunications carrier providing a POTS functionality (a "phone call").¹⁴⁴ By contrast, the separate ISP was not subject to CALEA because the functions it provided – such as "[t]he storage of a message in a[n] . . . E-mail 'box'" – were "information services."¹⁴⁵ Our tentative conclusion respects Congress's understanding and does not propose attaching CALEA obligations to services or applications that "ride over" the underlying broadband transmission, such as e-mail storage, web browsing capabilities, and Internet gaming.

52. Congress's expectation about CALEA coverage was entirely consistent with Commission regulations at the time. In 1994 (and today), when incumbent LECs and other facilities-based telecommunications carriers provided "enhanced services" (the regulatory predecessor to "information services"), they were required by Commission rules to offer the underlying transmission on a common carrier basis to other information services providers. Thus, the underlying transmission component of those services would always have been subject to CALEA under the definition of "telecommunications carrier." Given Congress's clear understanding that carriers providing *access* to ISP functionalities would be subject to CALEA, we do not believe that Congress intended the Information Services Exclusion to

¹⁴²See *Wireline Broadband NPRM* and *Cable Modem Declaratory Ruling & NPRM*, *supra* n.81.

¹⁴³See *supra* Section III.B.1.a.

¹⁴⁴*House Report*, 1994 U.S.C.C.A.N at 3503 (indicating that the *transmission* of an e-mail message to an enhanced service provider that maintains the e-mail service *is* subject to CALEA).

¹⁴⁵*Id.* Congress provided a similar example in voice mail: "The storage of a message in a voice mail . . . 'box' is not covered by the bill. The redirection of the voice mail message to the 'box' . . . [is] covered." *House Report*, 1994 U.S.C.C.A.N at 3503.

remove from CALEA's reach the comparable access function provided by today's broadband Internet access providers.¹⁴⁶ Indeed, permitting technological developments to remove services from CALEA's coverage would be at odds with Congress's explanation that CALEA's purpose is "to *preserve* the government's ability . . . to intercept communications involving advanced technologies" and "to insure that law enforcement can continue to conduct authorized wiretaps in the future."¹⁴⁷ We would therefore resolve any tension in CALEA's definitions in favor of CALEA's applicability to broadband Internet access service and classifying providers of broadband Internet access under CALEA as telecommunications carriers, not information services providers. We seek comment on this analysis.

(ii) VoIP Services

53. As explained in the *IP-Enabled Services Notice*, there is a wide array of packet-based services currently using IP as well as numerous ways that VoIP capabilities might be provided to consumers.¹⁴⁸ For example, one VoIP service in particular, which we refer to in this proceeding as "managed" VoIP, may be offered to the general public as a means of communicating with anyone, including parties reachable only through the public switched telephone network ("PSTN").¹⁴⁹ Other VoIP offerings involve the capability to communicate on a peer-to-peer basis only with other members of a closed user group or groups such as the Free World Dialup offering described in the *Pulver.com Declaratory Ruling*.¹⁵⁰ Still other VoIP capabilities may be additional features of other services or applications that enable voice communications with a particular user group such as between Xbox users during an interactive game session or voice-enabled Instant Messaging.¹⁵¹

54. Law Enforcement seeks a Commission declaration that at least three different "business models" of VoIP service, in addition to all forms of broadband Internet access, are subject to CALEA.¹⁵² It indicates CALEA applies to these VoIP offerings because of the "obvious similarity" to "traditional circuit-

¹⁴⁶Furthermore, Congress articulated, consistent with its understanding of how CALEA would work, an expectation that LEAs "will most likely intercept communications over the Internet at the same place it intercepts other electronic communications: at the carrier that provides access to the public switched telephone network." *Id.* at 3504. We note that digital subscriber line offered on a tariffed basis as a telecommunications service is already subject to CALEA. See *Second R&O*, *supra* n.8 at 7120, ¶ 27.

¹⁴⁷See H.R. Rep. No. 103-827(I) (1994), reprinted in 1994 U.S.C.C.A.N. 3489 (Summary and Purpose); see, also, *supra* ¶ 3.

¹⁴⁸See *IP-Enabled Services Notice*, *supra* n.1, at 4871-79, ¶¶ 10-22; see also Petition at 16-17, n.39; NYSAG Comments at 5, n.15.

¹⁴⁹See *supra* ¶ 37 (describing managed VoIP services for purposes of this proceeding). VoIP providers such as Vonage; 8x8, Inc. ("8x8"); and Level 3 are examples of entities offering these types of services.

¹⁵⁰See *Pulver.com Declaratory Ruling*, *supra* n.84.

¹⁵¹The Petition does not propose to apply CALEA to services such as instant messaging or interactive game sessions. Indeed, Congress has spoken that these services are excluded from CALEA. See 47 U.S.C. § 1001(6)(B); see also *House Report*, 1994 U.S.C.C.A.N at 3503.

¹⁵²See Petition at 16 & n.39 (referring to the VoIP services in these models as "broadband telephony"). Some commenters other than LEAs support Law Enforcement's claim that VoIP services may be subject to CALEA. See, e.g., Verizon Comments at 4; TWT Reply Comments at 3-4.

mode telephony.”¹⁵³ Each of the models listed by Law Enforcement involves a managed VoIP offering accessible through a consumer’s broadband Internet access connection.¹⁵⁴ The primary difference for each model is the relationship, if any, between the VoIP provider and the broadband Internet access provider.¹⁵⁵ Law Enforcement indicates that a failure to find these VoIP services subject to CALEA would pose a serious risk that certain call content and call-identifying information would evade lawful electronic surveillance.¹⁵⁶ Law Enforcement indicates, however, that “peer-to-peer” VoIP communications are not intended to be covered by CALEA.¹⁵⁷

55. Some commenters support Law Enforcement’s claim that some VoIP service providers should be subject to CALEA.¹⁵⁸ Other commenters, however, maintain that it is unnecessary to subject VoIP service providers to CALEA because Law Enforcement may intercept packet-based communications through the PSTN or other transmission networks.¹⁵⁹ Commenters also suggest that in determining whether VoIP service providers are covered, the Commission should distinguish between the types of network architecture used by VoIP providers and, for example, exempt those that utilize a closed network solution, such as in exclusively peer-to-peer applications.¹⁶⁰

56. We tentatively conclude that providers of managed VoIP services,¹⁶¹ which are offered to the general public as a means of communicating with any telephone subscriber, including parties reachable only through the PSTN, are subject to CALEA. We believe that such VoIP service providers satisfy each

¹⁵³ Petition at 30; *see also* RIITA Comments at 2.

¹⁵⁴ *See* Petition at 16 & n.39 (describing the three models and the relationship of each to the broadband Internet access provider). Specifically, the three models are as follows: (1) Facilities-Based VoIP Service where the VoIP provider has its own broadband facilities and uses those facilities to offer its customers managed VoIP service; (2) “Cooperative” VoIP Application which involves at least two providers, a managed VoIP application provider and an underlying broadband Internet access provider which, through some commercial arrangement offer VoIP to end users; and (3) Stand-alone VoIP Application where the managed VoIP application is accessed through a “bring your own broadband” connection, *i.e.*, the VoIP provider has no relationship to its customers’ broadband Internet access provider. *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 21.

¹⁵⁷ *Id.* at 17.

¹⁵⁸ *See* Verizon Comments, 2-7; TWT Reply Comments at 3-4; *see also* NCTA Reply Comments, at 2, 5-6 & n.9.

¹⁵⁹ *See, e.g.*, Skype Comments at 4.

¹⁶⁰ *Id.* *See, also*, 8x8, Inc. Reply Comments.

¹⁶¹ *See supra* n.83.

of the three prongs of the Substantial Replacement Provision with respect to their VoIP services.¹⁶² That is, they provide an electronic communication switching or transmission service that replaces a substantial portion of local exchange service for their customers in a manner functionally the same as POTS service; and the public interest factors we consider at a minimum – *i.e.*, the effect on competition, the development and provision of new technologies and services, and public safety and national security – support subjecting these providers to CALEA.¹⁶³ We believe there is an overriding public interest in maintaining Law Enforcement’s ability to conduct wiretaps of on-going voice communications that are taking place over networks that are rapidly replacing the traditional circuit-switched network, yet providing consumers essentially the same calling capability that exists with legacy POTS service.¹⁶⁴ We understand that basic capabilities essential to Law Enforcement’s surveillance efforts, such as access to call management information (*e.g.*, call forwarding, conference call features such as party join and drop) and call set up information (*e.g.*, real time speed dialing information, post-dial digit extraction information) may not be reasonably available to the broadband access provider.¹⁶⁵ Consequently, subjecting only the broadband access provider to CALEA without including managed VoIP service providers could undermine Law Enforcement’s surveillance efforts. We seek comment on this analysis.

57. We tentatively decline to adopt Law Enforcement’s recommendation of basing statutory classifications on proposed “business models.” We have strong concerns that such a regulatory approach could be easily circumvented and could adversely affect innovation by giving VoIP service providers a regulatory incentive (rather than a business or technical incentive) to design their services to avoid falling within one of the covered business models. Nevertheless, we invite comment on the proposed models and on the business model approach generally.

58. We also seek comment on our tentative conclusion that providers of non-managed, or disintermediated, communications should not be subject to CALEA.¹⁶⁶ Non-managed VoIP services, such as peer-to-peer communications and voice enabled Instant Messaging, as currently provided, do not appear to be subject to CALEA for two reasons. First, because they are confined to a limited universe of users solely within the Internet or a private IP-network, they may be more akin to private networks, which Congress expressly excluded from section 103’s capability requirements.¹⁶⁷ Therefore, they do not appear to replace a substantial portion of local exchange service; as such they do not appear to fall within the

¹⁶²See *supra* ¶¶ 40-45. Managed VoIP service providers provide “subscribers the ability to originate, terminate or direct communications” in a manner “that allows the customer to obtain access to a publicly switched network.” See *House Report*, 1994 U.S.C.C.A.N at 3504 (Section-by-Section Analysis). For the reasons stated above, we do not believe CALEA’s Information Services Exclusion should alter our tentative conclusion. See *supra* ¶¶ 50-52.

¹⁶³See *supra* n. 132.

¹⁶⁴See *e.g.*, NYSAG Comments at 16-17; NDAA Comments at 1-2.

¹⁶⁵See *infra* ¶¶ 65-68.

¹⁶⁶See *supra* n.83.

¹⁶⁷47 U.S.C. § 1002(b)(2)(B); see also *House Report*, 1994 U.S.C.C.A.N at 3498 (Narrow Scope); *Second R&O*, *supra* n.8 at 7112, ¶ 12. We refer commenters to the legislative history’s discussion of private networks to address to what extent this affects the Commission’s analysis. See *House Report*, 1994 U.S.C.C.A.N at 3503 (Section-by-Section Analysis). We seek comment on whether there is some point at which certain “private” networks, because of an unlimited number of users, may be found to be more “public” than “private.”

Substantial Replacement Provision. Second, they may be excluded information services under section 103(b)(2)(A) (as discussed above). We seek comment on this issue. Are there other characteristics or distinguishing features that may be used to determine whether a particular class of VoIP service providers is covered under CALEA? One example may be that VoIP service providers are covered under CALEA where their service interconnects to the PSTN.

59. Finally, we ask commenters to identify other providers of packet-based or broadband services, if any, that may appear to satisfy CALEA's definition of "telecommunications carrier" and why the public interest would be served by subjecting these providers to CALEA.¹⁶⁸ To the extent an entity is not a "telecommunications carrier" under CALEA, is there any legal basis for exercising ancillary authority to impose some type of law enforcement assistance requirements on these entities? Section 151 of the Communications Act charges the Commission with carrying out its obligations for a number of stated purposes, including "for the purpose of the national defense" and "for the purpose of promoting safety of life and property."¹⁶⁹ How would the Information Services Exclusion and section 103(b)(2)(A) of CALEA impact the Commission's authority to exercise ancillary jurisdiction over non-subject entities?

2. Identification of Future Services and Entities Subject to CALEA

60. We tentatively conclude that it is unnecessary for us to adopt Law Enforcement's proposal regarding the identification of future services and entities subject to CALEA. We recognize Law Enforcement's need for more certainty regarding the applicability of CALEA to new services and technologies. We expect, however, the Commission's Report and Order in this proceeding to provide substantial clarity on the application of CALEA to new services and technologies that should significantly resolve Law Enforcement's and industry's uncertainty about compliance obligations in the future. In its Petition, Law Enforcement proposes that the Commission establish presumptions that: (1) a service is covered by CALEA pursuant to section 102(8)(A) if the service directly competes against a service already deemed to be covered by CALEA; (2) an entity is covered by CALEA pursuant to section 102(8)(A) if an entity is engaged in providing wire or electronic communication switching or transmission service to the public for a fee; and (3) a service currently provided using any "packet-mode" technology and covered by CALEA that subsequently is provided using a different technology will continue to be covered by CALEA.¹⁷⁰ Further, Law Enforcement proposes that the Commission require any entity that believes that its equipment, facilities, or services are not subject to CALEA to file a petition for clarification with the

¹⁶⁸ See *supra* n.94. We make clear that we do not, however, solicit comment on packet-based or broadband services that are clearly excluded from CALEA such as electronic mail.

¹⁶⁹ 47 U.S.C. § 151. Federal courts have recognized the Commission's authority to promulgate regulations to effectuate the goals and accompanying provisions of the Act in the absence of explicit regulatory authority, if the regulations are reasonably ancillary to the effective performance of the Commission's various responsibilities. See *United States v. Southwestern Cable Co.*, 392 U.S. 157, 178 (1968) (*Southwestern Cable*); see also *FCC v. Midwest Video Corp.*, 440 U.S. 689 (1979); *United States v. Midwest Video Corp.*, 406 U.S. 649 (1972) (*Midwest Video*); *Promotion of Competitive Networks in Local Telecommunications Markets*, *Wireless Commun. Ass'n Int'l, Inc., Petition to Amend Section 1.4000 of the Commission's Rules*, WT Docket No. 99-217, CC Docket No. 96-98, and CC Docket No. 88-57, *First Report and Order and Further Notice of Proposed Rulemaking in WT Docket No. 99-217, Fifth Report and Order and Memorandum Opinion and Order in CC Docket No. 96-98, and Fourth Report and Order and Memorandum Opinion and Order in CC Docket No. 88-57*, 15 FCC Rcd 22983 (2000) at 23028-29, ¶ 101 & n.261 (*Competitive Networks*); *Building Owners and Managers Association et al. v. FCC*, 254 F.3d 89 (D.C. Cir. 2001).

¹⁷⁰ See Petition at 33-34; see also Law Enforcement Reply Comments at 37-40.

Commission to determine its CALEA obligations.¹⁷¹ Law Enforcement argues that its proposed procedures would “ensur[e] that service offerings are CALEA-compliant on or before the date they are introduced to the marketplace.”¹⁷² Opponents argue that the proposal is inconsistent with the statute and its legislative history.¹⁷³ Moreover, they contend that Law Enforcement’s proposal, if adopted, will amount to a government pre-approval requirement for new technologies that will inevitably inhibit innovation.¹⁷⁴

61. We are concerned that the proposed approach could be inconsistent with the statutory intent and could create an obstacle to innovation. The requirements of the statute and its legislative history seem to support opponents’ arguments that Congress did not intend that manufacturers or providers would be required to obtain advance clearance from the government before deploying a technology or service that is not subject to CALEA.¹⁷⁵ For example, as commenters note, the statute does not permit any LEA to prohibit the adoption of any equipment, facility, service or feature, and places the responsibility for compliance on the carrier, manufacturer, or provider.¹⁷⁶ Moreover, we are concerned that, as a practical matter, providers will be reluctant to develop and deploy innovative services and technologies if they must build in CALEA capabilities to equipment that ultimately may not be subject to CALEA or wait for a ruling on the statute’s application. Accordingly, based on the foregoing, we tentatively conclude that it is unnecessary for us to adopt Law Enforcement’s proposal regarding identification of future services and entities subject to CALEA. We ask commenters to address our tentative conclusion. We additionally note that providers of new services may avail themselves of existing Commission procedures to seek clarification as to whether they are covered under CALEA.¹⁷⁷ We seek comment on whether Commission procedures are sufficient for these purposes and ask commenters to assess whether there are other procedures, consistent with CALEA, that we might adopt to assist LEAs as well as industry in this regard.

¹⁷¹ See Petition at 34.

¹⁷² *Id.*; see also Law Enforcement Reply Comments at 38-39.

¹⁷³ See ACLU Comments at 2; AT&T Comments at 21-22; BellSouth Comments at 19-22; CDT Comments at 29-30; CTIA Comments at 21-23; EFF Comments at 11-12; Global Crossing Comments at 10-12; ITIC Comments at 23-24; ISPPC Comments at 32-34; MCI Comments at 29-30; SIA Comments at 12-13; SBC Comments at 11-12; Sprint Comments at 12-13; TIA Comments at 18-20; USTA Comments at 7-8; Verizon Comments at 10 n.9; IPI Reply Comments at 4; CDT Reply Comments at 3-4; Level 3 Reply Comments at 7-8; Net2Phone Reply Comments at 16-17.

¹⁷⁴ See ACLU Comments at 2; AT&T Comments at 21-22; BellSouth Comments at 19-22; Ren Bucholz Comments at 1; Robert A. Collinge Comments at 1; CTIA Comments at 23; Covad Comments at 14-16; Global Crossing Comments at 10-12; ITIC Comments at 23-24; ISPPC Comments at 32-34; MCI Comments at 29-30; SIA Comments at 12-13; SBC Comments at 11-12; Sprint Comments at 12-13; TIA Comments at 18-20; USTA Comments at 8; Verizon Comments at 9; VONC Comments at 10; IPI Reply Comments at 4; Level 3 Reply Comments at 7-8; Net2Phone Reply Comments at 16-17; Letter from Keith R. McCall, Pennsylvania State Representative, to Marlene Dortch, Secretary, Federal Communications Commission, RM-10865 at 2 (filed Mar. 29, 2004).

¹⁷⁵ *House Report*, 1994 U.S.C.C.A.N. at 3493.

¹⁷⁶ See 47 U.S.C. §§ 1002(b)(1)(B), 1006(a)(3)(B); see also *House Report*, 1994 U.S.C.C.A.N. at 3503; Sen. Leahy, 140 Cong. Rec. 20,444-45 (Aug. 9, 1994).

¹⁷⁷ See, e.g., 47 C.F.R. § 1.2.

C. REQUIREMENTS AND SOLUTIONS

62. In this section we discuss a carrier's obligations under section 103 and compliance solutions as they relate to broadband access and VoIP services. Based on the comments filed on the Petition, we believe there are several outstanding issues in each of these areas that must be addressed if we are to ensure successful implementation of CALEA.

1. Carrier obligations under section 103

63. Packet technologies are fundamentally different from the circuit switched technologies that were the primary focus of the Commission's earlier decisions on CALEA. These differences have led to disagreements among Law Enforcement and industry as to how to interpret and apply telecommunications carriers' obligations under section 103 of CALEA. Telecommunications carriers are required, under section 103, to enable LEAs, pursuant to a court order or other lawful authorization, (1) to intercept, to the exclusion of other communications, wire and electronic communications carried by the carrier to or from a subject, and (2) to access call-identifying information that is reasonably available to the carrier, subject to certain conditions. Further, the interception of communications or access to call-identifying information is to be delivered to LEAs in a format that may be transmitted, over the equipment, facilities or services procured by LEAs, to a location other than the provider's premises and in a way that protects the privacy and security of communications and information not authorized to be intercepted or accessed.

64. CALEA defines call-identifying information as "dialing or signaling information that identifies the origin, direction, destination, or termination of each communication generated or received by a subscriber by means of any equipment, facility, or service of a telecommunications carrier." In applying this definition to the initial J-STD-025, which dealt primarily with circuit-switched networks, the Commission determined that call-identifying information was not limited to telephone numbers and that it was appropriate in some cases to use a functional equivalent to give meaning to the statutory terms (*e.g.*, wireless carriers identify the physical location of the antenna tower that a mobile phone uses to connect at the beginning and end of a call).¹⁷⁸ The Commission adopted the following definitions of the component terms in the statutory definition of call-identifying information: **origin** is a party initiating a call (*e.g.*, a calling party), or a place from which a call is initiated; **destination** is a party or place to which a call is being made (*e.g.*, the called party); **direction** is a party or place to which a call is re-directed or the party or place from which it came, either incoming or outgoing (*e.g.*, a redirected-to party or redirected-from party); and **termination** is a party or place at the end of a communication path (*e.g.*, the called or call-receiving party, or the switch of a party that has placed another party on hold).¹⁷⁹ The Commission concluded that these definitions defined call-identifying information in a manner that could be converted into actual network capabilities and would accommodate CALEA's intent to preserve the ability of LEAs to conduct electronic surveillance as technology changes.¹⁸⁰

65. We believe that carriers, manufacturers and Law Enforcement have applied the statutory definition of call-identifying information, as well as the Commission's definitions for the terms origin, destination, direction and termination, in developing standards or proprietary solutions for packet-mode

¹⁷⁸ *Order on Remand*, *supra* n.32 at 6907-08, ¶ 34.

¹⁷⁹ *Id.* at 6911, ¶ 47. *See also* 47 C.F.R. §§ 22.1102, 24.902, 64.2202.

¹⁸⁰ *Order on Remand* *supra* n.32 at 6911, ¶ 48.

technologies. However, the exact application of these terms is not always clear. Call-identifying information may be found within several encapsulated layers of protocols.¹⁸¹ For example, the data link layer (supported by switches or bridges) contains hardware source and destination address information; the network layer (supported by routers) contains the source and destination IP address; and the transport/session/presentation/application layers (supported by host devices and gateways) contain source and destination port addresses, session sources and destinations, and session start and stop times. As the packet makes its way through the network of the broadband access service and Internet service providers, these providers' equipment generally do not examine or process information in the layers used to control packet-mode services such as VoIP, and in fact operate at layers below the ones that carry control information for broadband access services. As a result, the broadband access service and Internet service providers may not be able to easily isolate call-identifying information for VoIP without examining the packet in detail, or in other words, examining the packet content.

66. There are potentially several kinds of information about broadband access service that Law Enforcement may seek under section 103's requirements. For broadband access these potentially include, but are not necessarily restricted, to the following: (1) information about the subject's access sessions, including start and end times and assigned IP addresses, for both mobile and fixed access sessions; (2) information about changes to the subject's service or account profile, which could include, for example, new or changed logins and passwords; and (3) information about packets sent and received by the subject, including source and destination IP addresses, information related to the detection and control of packet transfer security such as those in Virtual Private Networks ("VPNs"), as well as packet filtering to favor certain traffic going to or from certain customers. For VoIP, the concept of "call" seems well understood, and we might expect call-identifying information to include who called whom when for how long, and concepts similar to call-identifying information for circuit-mode calls.

67. We seek comment on whether the Commission needs to clarify the statutory term "call-identifying information" for broadband access and VoIP services. We ask that commenters provide specific suggestions for these definitional issues. A more precise understanding of these terms would support the Commission's efforts to encourage carriers' compliance with their CALEA obligations whether in acting on petitions filed under sections 107(c) or 109(b) or in pursuing enforcement actions for violations of the Commission's rules. We also invite comment as to how the Commission should apply the term "reasonably available" to broadband access. We observe that the Commission has previously determined that information may not be "reasonably" available if the information is only accessible by significantly modifying a network.¹⁸² The Commission applied these criteria when determining that dialed-

¹⁸¹In the Open System Interconnection ("OSI") model, layered network architecture for packet networks typically consists of seven layers: physical, data link, network, transport, session, presentation and application. The model calls for the independent operation of the layers, and supports the interaction of various applications and equipment that is designed to address separately each layer in a product offering. In the Transport Control Protocol ("TCP")-IP model, only four levels are used: link (combines OSI physical and data link levels), network, transport and application (combines OSI session, presentation and application levels). The functions supported at each layer are as follows: *physical*—represents electrical signaling, modulation, etc.; *data link*—moves packets (also called "datagrams") between hosts based on a protocol such as Ethernet, Asynchronous Transfer Mode, frame relay; *network*—defines how data is routed between hosts over one or several networks, often based on IP; *transport*—establishes the connection between two hosts, creating a "virtual" network, often based on TCP or Universal Datagram Protocol; *session*—controls the setup and termination of communications sessions; *presentation*—defines the format of the data exchanged (e.g., text, graphic); *application*—defines how applications communicate with each other over the network (e.g., e-mail) using various protocols.

¹⁸²*Order on Remand, supra* n.32 at 6926-27, ¶ 80.

digit extraction (“DDE”) could be made available without significantly modifying a circuit-switched network because the information was present at the circuit intercept access point.¹⁸³ Although carriers would have to incur some costs to extract the information, we did not view cost as a factor in whether information is “reasonably available” for purposes of section 103(a)(2). We determined that cost concerns were best addressed as part of a section 107(b) analysis in deciding whether to require the provision of DDE.

68. We tentatively conclude that we should apply the same criteria—*i.e.* information may not be “reasonably” available if the information is only accessible by significantly modifying a network—to broadband access and VoIP providers. We seek comment on this tentative conclusion. We recognize that, when looking at end-to-end service architectures, it is not always readily apparent where call-identifying information is available. We seek comment on where content and various kinds of call-identifying information are available in the network and further whether the information is reasonably available to the carrier. We anticipate that some call-identifying information may be available from either a VoIP provider or a broadband access provider. In these instances, would the call-identifying information be reasonably available from one entity but not from the other? If the information is reasonably available from both carriers, we expect that both carriers would have a CALEA obligation with respect to that information and would work cooperatively with each other and with the LEA to provide the LEA with all required information. We seek comment on these issues.

2. Compliance solutions based on use of a “trusted third party”

69. Telecommunications carriers under CALEA may use a variety of means for making content or call-identifying information available to LEAs. We seek comment on one approach that, although it would not relieve carriers of their obligation to comply with CALEA, may simplify or ease the burden on carriers and manufacturers in providing packet content and call-identifying information. We refer to this approach as the “trusted third party” approach, that is being used today both in the United States and elsewhere.¹⁸⁴ A trusted third party is a service bureau with a system that has access to a carrier’s network and remotely manages the intercept process for the carrier. The service bureau may manage CALEA operations for multiple carriers, and the service bureau’s system may be completely external to all of those carriers’ networks.

70. The trusted third party approach recognizes that, even if a carrier does not process certain call-identifying information, that information may be extracted from that carrier’s network and delivered to a LEA. The trusted third party obtains the call content and call-identifying information in either of two ways. The trusted third party could rely on a mediation device to collect separated call content and call-identifying information from various points in the network and to deliver the appropriate information to a LEA. Alternatively, the trusted third party could rely on an external system to collect combined call content and call-identifying information and to deliver the appropriate information to a LEA. We describe both of these models in Appendix C.¹⁸⁵ We believe that the availability of a trusted third party approach makes

¹⁸³ *Id.*

¹⁸⁴ Both VeriSign and Fiducianet, Inc. provide service bureau CALEA-compliance functions for telecommunications carriers including administration (*e.g.*, processing subpoenas), accessing communications (*e.g.*, call data and call content mediation), and delivering information to a LEA.

¹⁸⁵ The first model described in Appendix C, which serves as a baseline, describes a carrier separating call content and call-identifying information that can be delivered directly to a LEA. The second model in Appendix C describes a system that uses a mediation device. The third model in Appendix C describes an external system.

call-identifying information "reasonably" available to a telecommunications carrier under section 103(a)(2). We seek comment on this analysis.

71. Our discussion below focuses on the external system approach which would identify, isolate and extract call-identifying information from the packets going to and from a subject. Using an external system to extract the content and call-identifying information of a communication from encapsulated packets has several advantages. As VeriSign notes, the use of a third party would permit "lawful interception of Internet access, IP-Enabled or VoIP services" but would not "adversely affect the evolution or deployment of those services."¹⁸⁶ The network equipment used to provide the service would only need to be able to provide the subject's raw content to the external system. The trusted third party would, in turn, do the heavy lifting, *i.e.*, analyze the data and provide a LEA with only that information to which it is entitled. The advantage to equipment manufacturers is that suppliers of network equipment for new services would not have to choose between providing potentially expensive surveillance features that may turn out not to be required under CALEA, versus not providing the surveillance features initially and potentially having to "force fit" the features into the equipment design if they are subsequently required. The advantage to carriers and service providers is that the use of a trusted third party could minimize the impact of CALEA on network evolution and the deployment of new services.

72. We seek comment on the feasibility of using a trusted third party approach to extract the content and call-identifying information of a communication from packets. In particular, we seek comment on whether an external system would be an efficient method to extract information from packets. It seems that external systems might provide economies of scale for small carriers. What would be the approximate relative costs of internal versus external systems for packet extraction?

73. We recognize, however, that there may be some tension between relying on a trusted third party model and relying on "safe harbor" standards. For example, if a trusted third party approach makes call-identifying information "reasonably" available to a telecommunications carrier, should a standard that requires a carrier to provide only the information it uses to process a packet be considered a "safe harbor" if a LEA would not have all call-identifying information for the communication?

74. Reliance on a trusted third party may shift the burden now shared by carriers and manufacturers in complying with CALEA. For example, would it be adequate to require network equipment to provide only packet content under the terms of J-STD-025-A, and to allow the manufacturers of that equipment to assume that any additional analysis of the content will be provided by an external system? TIA asks "May a particular [network equipment supplier] conclude that its customers can find other CALEA solutions from other suppliers, and at that point withdraw from the CALEA process without liability? ... Could a supplier be forced to reenter the CALEA market if the third-party suppliers it was counting on go out of business?"¹⁸⁷ What impact would reliance on a trusted third party have on developing standards for CALEA compliance? What tools would a service bureau need to interface with various products from numerous vendors and would this responsibility be difficult to meet or too expensive? Are there incentives to keep manufacturers engaged in developing CALEA compliance solutions if carriers relied on a trusted third party?

¹⁸⁶VeriSign Comments at 8.

¹⁸⁷TIA Comments at 16.

75. The financial responsibility for funding a trusted third party approach could follow several models. The trusted third party could be owned by the packet service provider or Law Enforcement, or it could be an independent surveillance service provider who contracts with individual carriers.

76. Finally, we seek comment on how a telecommunications carrier that relies on a trusted third party would meet its obligations under section 103(a) of CALEA, *e.g.*, to protect the privacy and security of communications and call-identifying information not authorized to be intercepted, as well as to protect information regarding the government's interception of communications and access to call-identifying information.

3. Compliance solutions based on CALEA "Safe Harbor" standards

77. In this section, we invite comment on a variety of industry standards for packet-mode technologies to determine whether any of these standards are deficient and thus preclude carriers, manufacturers and others from relying on them as safe harbors in complying with section 103. Over the past several years, various standard setting organizations have been developing standards for various types of packet technologies that support a variety of applications used in both wireline and wireless networks. These standards could serve, pursuant to section 107(a) of CALEA, as "safe harbors" for section 103 compliance by telecommunications carriers. The standards process is ongoing in several different venues, with some standards already having undergone modification and new ones under development. Compliance with a "safe harbor" standard is not required by CALEA.

78. Law Enforcement has been critical of some standards processes and states in its Petition that "industry standard-setting organizations did not agree with Law Enforcement's position that industry is required to provide the same level of capability for packet-mode technology as it does for circuit-mode technology. The unfortunate result is that packet-mode standards that have been published are deficient."¹⁸⁸ It seems that underlying this assertion are assumptions that the definition of call-identifying information can be clearly applied to packet networks, that information so identified is "reasonably available" to the carrier, and that the provision of the information to LEAs by the carrier is "reasonably achievable." Some commenters, such as TIA, disagree with Law Enforcement's assertion and argue that the statute's requirements in section 103 must be evaluated with respect to a particular technology, not a service, and cannot be presumed to produce the same outcome for every technology.¹⁸⁹ TIA adopted a technology platform approach, rather than a service-focused approach (*e.g.*, VoIP), in its standards work for several reasons. TIA believes that a service-focused approach would be difficult to implement because many different services can be deployed in different ways over any one platform and, since services evolve faster than platforms, it would be harder to develop a stable standard. On the other hand, a technology platform approach could define a set of network events common to all services and specify call-identifying information that could be extracted without analyzing more of the packet than would otherwise be required to process the packet.¹⁹⁰

79. Although pursuant to section 107(b) the Commission may, upon petition, establish rules, technical requirements or standards necessary for implementing section 103 "[i]f a Government agency or

¹⁸⁸Petition at 35.

¹⁸⁹TIA Reply Comments at 12.

¹⁹⁰TIA Reply Comments at Brooks Affidavit at 11.

any other person believes that such requirements or standards are deficient,"¹⁹¹ the Court has determined that were it to allow the Commission to mandate modification of an industry standard "without first identifying its deficiencies, [the Court] would weaken the major role Congress obviously expected industry to play in formulating CALEA standards."¹⁹² We ask parties to comment on industry standards for packet-mode technologies in an attempt to determine whether any of these standards are deficient and thus preclude carriers, manufacturers and others from relying on them as safe harbors in complying with section 103. By doing so, however, we do not intend to inhibit the ongoing work by standards organizations, carriers and manufacturers to develop and deploy CALEA-compliant facilities and services. We recognize that CALEA provides that carriers and others may rely on publicly available technical requirements or standards adopted by an industry association or standard-setting organization to meet the requirements of section 103, unless the Commission takes specific action in response to a petition.

80. As an initial matter, we invite comment as to whether there is any need to define what constitutes publicly available technical requirements or standards adopted by an industry association or standard-setting organization. It appears that any group or organization could publish a set of technical requirements or standards and claim it to be a "safe harbor." Should we interpret the above terms to mean only standards developed by organizations recognized by the American National Standards Institute ("ANSI")? Should these terms also cover technical specifications that are developed and published by other types of industry organizations, such as CableLabs®, which is a consortium of cable TV system operators? Should we also recognize standards developed by non-U.S. standards organizations, such as the European Telecommunications Standards Institute?

81. We seek comments regarding the appropriateness of available standards and specifications, discussed in Appendix D, to be used as safe harbors for packet-mode communications for purposes of CALEA.¹⁹³ Commenters should indicate whether the standard can serve as a safe harbor under section 107(a) for one or more packet services and/or technologies. In cases where a standard meets many but not all of the statutory requirements to serve as a safe harbor, commenters should identify where the standard is deficient, as that term is used in section 107(b).¹⁹⁴ In areas where a commenter believes a standard is deficient, we seek suggestions on how the deficiency can be eliminated. We also seek comments about the reason or reasons for each alleged deficiency. For example, did standards developers believe that the feature would be unacceptably expensive or complex or otherwise not reasonably achievable? Was there concern that the surveillance feature might interfere with revenue-producing features? Was there a concern that a feature might be unacceptably invasive of privacy? Was there a concern that the feature would result in unacceptable degradation in service performance? Commenters should also provide estimates for the amount of time industry and LEAs are likely to need to correct the deficiency, and should indicate whether work to correct each deficiency has begun or been planned. In cases where a standard meets many but not all of the requirements to serve as a safe harbor for a service or technology, can the standard be used as a

¹⁹¹ 47 U.S.C. § 1006(b).

¹⁹² *United States Telecom. Association v. FCC*, 227 F.3d 450 (D.C. Cir. 2000). The decision is available at <http://www.fcc.gov/ogc/documents/opinions/2000/99-1442.html> or at <http://www.fcc.gov/ogc/documents/opinions/2000/99-1442.doc>.

¹⁹³ The standards and specifications described in Appendix D are: TIA standards J-STD-025, J-STD-025-A, and J-STD-025-B; ATIS standards T1.724 and T1.678; and CableLabs® PacketCable™ specifications PKT-SP-ESP-I01-991229, PKT-SP-ESP-I01-030815, and PKT-SP-ESP-I03-040113.

¹⁹⁴ 47 U.S.C. § 1006(b).

“temporary” safe harbor, providing LEAs with immediate access to some features and providing a telecommunications carrier with protection against demands for additional features pending further action by the Commission in response to a petition filed under section 107(b)?¹⁹⁵

82. We note, for example, that there are at least three areas of contention in the standards process for broadband access, as well as VoIP services. First, providers of circuit-mode voice services are required under CALEA to implement features to make post-connection dialed digits available to LEAs.¹⁹⁶ DDE was among several features known collectively as the FBI’s “punch list” for surveillance of circuit-mode services.¹⁹⁷ These are features that Law Enforcement considered necessary, but which the industry claimed were not reasonably achievable in circuit-mode and were not included in the original version of J-STD-025. In regard to circuit-mode DDE, we have previously concluded “that some digits dialed by a subject after connecting to a carrier other than the originating [service provider] are call-identifying information. While a subject may dial digits after the initial call set-up that are not call-identifying information – e.g., a bank account number to access his/her bank statement – some digits dialed after connecting to an IXC [interexchange carrier] identify the ‘origin, direction, destination or termination’ of the communications.”¹⁹⁸ We also determined that the post-connection dialed digits were “reasonably available” at the intercept access point, even though the carrier may not use the digits for call processing purposes, without significantly modifying a carrier’s network by installing additional tone decoders.¹⁹⁹

83. For voice over packet (a technology used to provide most or all broadband telephony services), post-connection DDE is not required to be isolated and provided to LEAs under T1.678, T1.724, J-STD-025-B, or PKT-SP-ESP-I03-040113. A VoIP caller may also connect to an IXC, and the post-connection dialed digits may also identify the ‘origin, direction, destination or termination’ of the communications. We seek comment on whether DDE in packet networks is call-identifying information for the same reasons that we have previously concluded that it is in circuit-switched networks.²⁰⁰ Are there differences in packet technology that would preclude post-connection dialed digits from being termed call-identifying information? Are there differences in packet technology that would preclude post-connection DDE from being readily achievable? Is the omission of DDE or other punch list capabilities from these standards a deficiency under the terms of section 107(b)?

84. Second, when broadband telephony call-identifying information is provided to LEAs, Law Enforcement may have concerns with the format of the electronic interface used to provide this information as described in T1.724 and under one option in T1.678. The issue is whether the industry can send LEAs

¹⁹⁵For example, the *Third R&O* required wireline and wireless providers to meet the requirements in J-STD-025 for providing circuit-switched content, circuit-switched call-identifying information, and packet content to LEAs; while directing the industry to report back to the Commission at a later date on appropriate requirements for providing packet call-identifying information to LEAs. In essence, J-STD-025 was declared to be a safe harbor for circuit-mode voice and packet content; and effectively a temporary safe harbor for all packet-mode.

¹⁹⁶*Order on Remand, supra* n.32 at 6932, ¶ 93.

¹⁹⁷*See supra* ¶ 14.

¹⁹⁸*Third R&O, supra* n.26 at 16844-45, ¶ 119.

¹⁹⁹*Order on Remand, supra* n.32 at 6926-27, ¶ 80.

²⁰⁰*Third R&O, supra* n.26 at 16844-16846, ¶¶ 119-123.

copies of messages used by voice over packet systems that use terminology specific to the technology or function, or whether the messages must be converted into a format and common language more consistent with the messages in J-STD-025 and PKT-SP-ESP-I03-040113.²⁰¹ The kind of format used in J-STD-025 and PKT-SP-ESP-I03-040113 is preferred by Law Enforcement. We seek comment on what difficulties LEAs may encounter if information is provided in different formats, depending on the underlying transmission source. We also seek comment on whether uniformity of formatting is needed to satisfy the requirements of section 103(a)(3) concerning delivery of intercepted communications and call-identifying information.

85. Third, we seek comment about the adequacy or deficiency of available standards, including J-STD-025-B and T1.724, if broadband access service over cdma2000® or Universal Mobile Telecommunications System ("UMTS") wireless technology is ultimately determined to be subject to CALEA obligations. In particular, there is evidence of disagreement between Law Enforcement and the industry regarding CALEA obligations to provide call-identifying information on broadband access service communications between a surveillance subject and other customers and applications for broadband access service communications. Law Enforcement has requested information about each IP packet sent or received by a subject that includes certain information at higher protocol layers "that [the broadband access service provider's network] does not manage ... This may be a significant impact on the network equipment."²⁰² Nortel considers this to be one of its "Thorny Technical LI Issues."²⁰³ TIA states that J-STD-025-B does not require many types of information requested by Law Enforcement for a cdma2000® packet data system platform because that platform does not specify call management server functionality, which is needed to make the information "reasonably available."²⁰⁴ We therefore seek comment not only on the kinds of events which must be reported to LEAs, but also on the information which must be reported on each such event.

4. CALEA compliance for satellite networks based on system-by-system agreements

86. Next, we tentatively conclude that continued use of system-by-system arrangements is the appropriate method for satellite systems and will aid in meeting the goals of CALEA. We note that satellite carriers have used an approach based on negotiation, resulting in private agreements to provide information to LEAs.²⁰⁵ Satellite networks differ in fundamental ways not only from terrestrial networks but also from each other. These differences arise from unique aspects of the type of satellite used in the network (e.g., non-geostationary vs. geostationary satellites) and the gateway earth stations that may be located both within and outside the United States. System-by-system agreements between LEAs and satellite carriers account for the unique aspects of each system. For example, the agreement between Iridium Constellation LLC ("Iridium"), DoJ, and the FBI requires that Iridium pass all domestic communications (defined as (i) wire or electronic communications that originate and terminate within the U.S. and (ii) the U.S. portion of a wire/electronic communication that originates or terminates within the U.S.) through "a facility under the control of Iridium and physically located in the U.S., from which

²⁰¹Presentation to the FCC by Nortel Networks, March 25, 2004.

²⁰²*Id.* at slide 8.

²⁰³*Id.* at slide 11. "LI" means Lawful Intercept.

²⁰⁴TIA Reply Comments at Declaration of Terri L. Brooks at 14.

²⁰⁵SIA Comments at 2.

Electronic Surveillance may be conducted.”²⁰⁶ Similarly, the LEA agreement with Telenor Satellite, Inc. requires that all domestic communications be transmitted through U.S. earth stations or routed through a point of presence “that includes a network switch or router under the control of” Telenor that is located in the U.S.²⁰⁷ We tentatively conclude that continued use of system-by-system arrangements is the appropriate method for satellite systems and will aid in meeting CALEA’s goals. We seek comment on this tentative conclusion

D. CALEA COMPLIANCE EXTENSION PETITIONS

87. In this section, we discuss CALEA compliance and the availability of compliance extensions and relief from compliance, respectively, under CALEA sections 107(c) and 109(b). We propose to restrict the availability of compliance extensions under section 107(c), particularly in connection with packet-mode requirements, and we clarify the role and scope of CALEA section 109(b), which provides that the Commission may find that compliance with CALEA section 103 is not reasonable achievable, leaving it to the Attorney General to determine whether to pay telecommunications carriers’ compliance costs.²⁰⁸

1. Background

88. In its Petition, Law Enforcement contends that the CALEA implementation process, both with respect to packet-mode technologies and generally, is not working because there is no specific, concrete implementation and compliance plan. Accordingly, Law Enforcement requests that the Commission impose implementation deadlines and benchmark filings to phase in CALEA packet-mode compliance, just as the Commission has previously required in connection with other important public safety mandates, such as E911. Law Enforcement also requests that the Commission codify in its rules any CALEA packet-mode compliance phase-in benchmarks and deadlines and related filing requirements that it adopts, just as it did with the benchmarks and deadlines it adopted in the E911 docket.²⁰⁹

89. To date, the Commission has granted hundreds of section 107(c) extension petitions in consultation with the FBI²¹⁰ to permit carriers to phase-in CALEA compliance in connection with both

²⁰⁶Space Station System Licensee, Inc., Assignor and Iridium Constellation LLC, Assignee, for Consent to Assignment of License Pursuant to Section 310(d) of the Communications Act, *Memorandum Opinion, Order and Authorization*, 17 FCC Rcd 2271 at Appendix A, ¶ 2.1 (2002). See also, e.g., International Authorizations Granted, IB Docket No. 04-4, *Public Notice*, DA 04-628 (rel. March 8, 2004) (granting the assignment or transfer of control of space and earth station licenses relating to the Globalstar mobile satellite service to New Operating Globalstar LLC, subject to conditions, including assumption of agreements previously made with LEAs); Motient Services Inc. and TMI Communications and Company, LP, Assignors and Mobile Satellite Ventures Subsidiary LLC, Assignee, *Order and Authorization*, 16 FCC Rcd 20469 (2001).

²⁰⁷Lockheed Martin Global Telecommunications, Comsat Corporation, and Comsat General Corporation, Assignor and Telenor Satellite Mobile Service, Inc. and Telenor Satellite Inc., Assignee, Applications for Assignment of Section 214 Authorizations, Private Land Mobile Radio Licenses, Experimental Licenses, and Earth Station Licenses and Petition for Declaratory Ruling Pursuant to Section 310(b)(4) of the Communications Act, *Order and Authorization*, 17 FCC Rcd 2147 at Appendix B, ¶ 2.2 (2001).

²⁰⁸See 47 U.S.C. § 1008(b)(2)(A).

²⁰⁹Petition at 38-39.

²¹⁰See *supra* ¶ 17.

circuit-switched and packet technologies.²¹¹ The extension process has been relatively simple. In 2000, the Commission directed carriers to file extension petitions as of a date certain, and granted conforming petitions provisional, two-year extensions pending Commission action on the merits of individual petitions, based on a section 107(c)-based determination that compliance was not "reasonably achievable through application of technology within the compliance period."²¹² In their 9/28/01 *Public Notice*, the Commission's Common Carrier and Wireless Telecommunications Bureaus directed carriers and others seeking section 107(c) extensions of packet-mode CALEA requirements to file petitions no later than November 19, 2001, and granted additional, provisional two-year extensions.²¹³ In their 11/19/03 *Public Notice*, the Commission's Wireline Competition and Wireless Telecommunications Bureaus further extended these provisional extensions until January 30, 2004.²¹⁴ These packet-related extensions have now expired.²¹⁵ We have received approximately 800 new packet-related extension petitions since November 19, 2003. Because the terms of the 9/28/01 *Public Notice* remain in force, these petitions have all been afforded provisional two-year extensions, pending our action on the petitions.

90. Prior to June 30, 2004, the Commission also had on file approximately 750 section 107(c) petitions filed in connection with circuit-based CALEA requirements imposed pursuant to the Commission's April 2002 *Order on Remand* that responded to issues identified by the United States District Court.²¹⁶ After affirming the so-called "punch list" additions to the original J-Standard, the Commission directed carriers and others to file any section 107(c) extension petitions no later than June 30, 2002. Filed petitions received provisional, two-year extensions, which expired on June 30, 2004.²¹⁷ Since then, the Commission has received approximately 330 new section 107(c) petitions from wireline carriers, most seeking additional extensions to June 30, 2006.

2. Discussion

91. We support Law Enforcement's goal of strengthening the CALEA implementation process. We agree that timely implementation of both circuit-mode and packet-mode technology by

²¹¹The first telecommunications solutions developed by equipment manufacturers that complied with CALEA § 103's capability requirements were not offered to telecommunications carriers until May of 2000. Since that time, other manufacturers have released solutions and continue to do so. *CALEA Sixth Annual Report to Congress*, prepared by the FBI and the DoJ (January 9, 2001) at 5.

²¹²See *Public Notice*, *supra* n.42. All section 107(c) petitions are deemed confidential and protected against public release.

²¹³See 9/28/01 *Public Notice*, *supra* n.43.

²¹⁴See 11/19/03 *Public Notice*, *supra* n.44.

²¹⁵Some carriers filed extension petitions after the announced due dates (11/19/01 & 06/30/02). As a result, their circuit-mode extensions did not necessarily expire on June 30, 2004.

²¹⁶*Order on Remand*, *supra* n.32.

²¹⁷Additionally, the Commission has received a few CALEA section 109 petitions. Prior to June 30, 2004, these petitioners either withdrew or amended their CALEA section 109 petitions to include requests for relief under CALEA section 107(c)(2), and were treated as section 107(c) filers. Since June 30, 2004, the Commission has received a few new section 109(b) petitions, many of which have been framed so as to seek alternative relief under section 107(c).

telecommunications carriers is essential to ensure that electronic surveillance can be readily and efficiently performed. However, we believe that Law Enforcement's goal can be achieved without us imposing the implementation deadlines and benchmark filings it requests. We recognize that carriers have continued to rely on CALEA section 107(c) when submitting extension requests for packet-mode compliance. We intend to resolve the status of those petitions in this proceeding, but in a way that is not unduly disruptive. Accordingly, we intend to afford all carriers a reasonable period of time in which to comply with, or seek relief from, any determinations that we eventually adopt. We tentatively conclude that a "reasonable period of time" is 90 days and request comment on this tentative conclusion.²¹⁸ We may, on less than 90 days notice, require any or all carriers to provide additional information to support their extension requests. We seek comment on all issues identified in the following analysis, as well as any other issues that relate to disposition of pending and future extension requests.

a. Disposition of Circuit-Mode Extension Petitions

92. In their 9/28/01 *Public Notice*, the Commission's Common Carrier and Wireless Telecommunications Bureaus linked consideration of section 107(c) extension petitions to carrier participation in the FBI's Flexible Deployment Program.²¹⁹ This program provides a negotiation-based framework whereby the FBI and carriers agree upon carrier-specific schedules for achieving CALEA compliance.²²⁰ Based on staff conversations with industry representatives, third-party CALEA service providers, and the FBI, we believe that this approach has encouraged many carriers to become CALEA compliant with respect to circuit-based functionalities.²²¹ Because of the success of this program, the wide availability of circuit-based CALEA solutions, and the ability of most carriers to recover associated costs, it appears unlikely that many carriers will qualify for additional circuit-mode extensions, *i.e.*, after June 30,

²¹⁸Initially a 45-day compliance period was used, which tolled upon issuance of a Commission order denying CALEA section 107(c)(2) relief. See *Public Notice*, *supra* n.42 at 7486, ¶ 9. Subsequently the Commission granted automatic two-year extensions to telecommunications carriers that tolled upon the filing of a CALEA section 107(c)(2) petition, unless the Commission acted within that period and shortened the two-year compliance period. See 9/28/01 *Public Notice*, *supra* n.43, at 17103, ¶ 8.

²¹⁹9/28/01 *Public Notice*, *supra* n.43, at 17104-05, ¶¶ 10-13. We note that petitioners were offered a choice of three filing options, including the option to state that the petitioner is participating in the FBI's Flexible Deployment Assistance Plan and has included a copy of its Flexible Deployment Assistance Plan template with its section 107(c) petition. The overwhelming majority of petitioning carriers stated they were enrolled in the FBI's Flexible Deployment Assistance Plan.

²²⁰*Id.* See also *FBI CALEA Implementation Section, Flexible Deployment Assistance Guide* (Fourth Edit. May, 2004), <http://askcalea.net/docs/flexguide4.pdf>

²²¹The Commission originally received more than 900 section 107(c) petitions addressing circuit-based (punch list) functionalities. We subsequently received notification from filers withdrawing over 200 of these petitions as those carriers became CALEA compliant for circuit-based functionalities. Because carriers are under no obligation to inform us when they become CALEA-compliant, we believe that more carriers became CALEA-compliant for the punch list before their provisional extensions expired on June 30, 2004. We also understood that the RBOCs intended to be fully CALEA-compliant for circuit-based functionalities by June 30, 2004. And in fact, no RBOC has filed for additional 107(c) relief from circuit-mode CALEA obligations since June 30. We note that, if all RBOCs are now punch list compliant, wireline carriers are able to provide circuit-based CALEA functionalities in connection with nearly 85% of all U.S. access lines, including coverage in most major metropolitan areas.

2004.²²² Certain entities, predominantly small and rural carriers, however, may qualify for additional extensions for cost-related or other reasons. Many of these carriers are enrolled in the FBI's Flexible Deployment Program and, we believe, are continuing active negotiations with the FBI. We encourage such carriers to continue these negotiations. We seek comment about whether we should authorize additional section 107(c) extensions in such cases, *i.e.*, by basing extension grants on active participation in the Flexible Deployment Program and continued FBI support for particular petitions. Specifically, we seek comment on whether participation in the Flexible Deployment Program with FBI support should continue to function as a surrogate or proxy determination of what is "reasonably achievable" under section 107(c). We note that most of the new section 107(c) petitions filed by wireline carriers in response to the June 30, 2004 expiration date have been filed by rural carriers.

93. We also seek comment about what supporting information and documentation should accompany section 107(c) petitions if carriers are not participating in the Flexible Deployment Program, or if the FBI were to oppose a particular petition filed by a carrier participating in the program, or if the FBI were to terminate the program. We tentatively conclude that submitted information should include a compliance plan that will outline how the petitioner proposes to become CALEA compliant for circuit-mode capabilities by specified dates, and that no date may be set later than two years after the date of the petition. Additionally, the petition should include the information described in Appendix E of this *Notice*, as well as a "due diligence" description of the petitioner's attempts to become CALEA compliant since June 30, 2002. This description should include a documented recital of negotiations with equipment manufacturers and third-party CALEA service providers, or other persuasive evidence that the petitioner actively and diligently searched for available CALEA-compliant solutions. Regarding petitioner showings about costs associated with circuit-mode CALEA compliance, we expect that parties will submit detailed and specific information, and we direct parties' attention to the discussion in the *Second R&O*, including our determination that costs not directly related to CALEA compliance may not be included.²²³ We seek comment on all aspects of this analysis and related issues and questions,²²⁴ including appropriate protections for cost and other information that petitioners assert to be proprietary or otherwise sensitive.²²⁵

b. Disposition of Packet-Mode Extension Petitions

(i) Background

94. More than two years have passed since the Commission mandated that carriers intercept and deliver packet content to LEAs pursuant to CALEA. Progress toward achieving packet-based compliance has been slow, with few carriers implementing the content standard to date. Even more frustrating, industry progress developing additional packet-based standards has been slow, notwithstanding our expectation that this process would accelerate following adoption of a content standard. Nevertheless,

²²² *Order on Remand*, *supra* n.32 at 6919, ¶ 64.

²²³ *Second R&O*, *supra* n. 8 at 7129, ¶ 40. We also determined that only overhead costs incremental to and resulting from CALEA compliance may be included in carrier cost showings relating to CALEA implementation.

²²⁴ See also discussion at ¶ 97 *infra* (interpreting section 107(c) as expressly limited to cases where the petitioning carrier proposes to install or deploy, or has installed or deployed, equipment, facility, or service "prior to the effective date of section 103," *i.e.*, prior to October 25, 1998).

²²⁵ See 47 C.F.R. §§ 0.457-0.461.